

REMARKS

Claims 1-25 of the present application remain pending. Claims 1, 16, and 22 are amended herein. No new matter is added as a result of the Claim amendments.

CLAIM REJECTIONS 35 U.S.C. § 103(a)

Claims 1, 5, 6, 8, 10, 11, 14, 16-19, 21, 22, 24, and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Callicott et al (U.S. Patent No. 6,343,519), hereinafter referred to as "Callicott" in view of Robsky et al. (U.S. Patent No. 5,838,309), hereinafter referred to as "Robsky." The Applicants respectfully submit that the claimed embodiments of the present invention are not rendered obvious by Callicott alone or in combination with Robsky.

Claim 1 of the present invention recites (emphasis added):

a display mechanism;  
a plurality of pressure activated sensors; and  
a single-piece bezel-less top cover enclosing said handheld electronic device to allow mechanical transfer between said top cover and said plurality of pressure activated sensors, wherein said pressure activated sensors can be activated by mechanical pressure applied to the external surface of said single-piece cover enclosure.

Claim 16 of the present invention recites (emphasis added):

a display mechanism of flat panel display technology;  
a transparent single-piece cover enclosing said handheld electronic device that is bezel-less and is disposed over a top surface of said display mechanism and operable to allow mechanical transfer of pressure to said display mechanism; and  
a plurality of pressure activated sensors disposed under said display mechanism and, responsive to said mechanical transfer of said display

mechanism, operable for registering a contact point on said transparent single-piece cover.

Claim 22 of the present invention recites (emphasis added):

a display mechanism of flat panel display technology;  
a back cover;

a transparent single-piece cover enclosing said handheld electronic device that is bezel-less and disposed over a top surface of said display mechanism; and

a plurality of pressure activated sensors disposed between said transparent single-piece cover and said back cover and, responsive to pressure asserted on said transparent single-piece cover, operable for registering a contact point on said transparent single-piece cover.

The Applicants respectfully submit that Callicott does not teach or suggest anywhere a plurality of pressure activated sensors which can be activated by mechanical pressure applied to the external surface of a single-piece cover enclosure. More specifically, the plurality of pressure activated sensors (28) cited in the rejection are actually components of a capacitive detector and, therefore, teach away from limitations recited in Claims 1, 16, and 22 of the present invention. For example, Callicott teaches in column 3, line 66-column 4, line 8 (emphasis added):

When an object does approach the display screen 14, the object increasingly acts as a load that is capacitively coupled to the active ITO layer 28. More specifically, as the object moves closer to the active ITO layer 28, the capacitive coupling between the object and the active ITO layer 28 becomes greater. An object that is capacitively coupled to the active ITO layer 28 acts as a load on the active ITO layer 28 which results in current flow through each of the corners of the active ITO layer 28, and hence the corner wires 20a-20d.

The Applicants respectfully submit that Callicott does not teach or suggest activating pressure activated sensors as a result of mechanical pressure applied to a single-piece top cover of a handheld device. Additionally, Callicott does not teach or suggest using a single-piece bezel-less top cover for handheld device of any sort.

With reference to Robsky, the Applicants respectfully submit that Robsky fails to overcome the shortcomings of Callicott. Specifically, Robsky fails to teach or suggest a plurality of pressure activated sensors which are activated by mechanical pressure applied to a top cover. Instead, Robsky teaches away from the present invention in describing a resistive digitizer mechanism. For example, Robsky teaches an insulating spacing means (e.g., spacing means 20) which separates conductive surface 18 from conductive membrane 24 and would mechanically interfere with the claimed pressure activated sensors. Robsky further teaches in column 3, lines 23-25:

Conductive surface 18 may be an electrically resistive sheet material such as carbon or Indium Tin Oxide,...

Therefore, the Applicants respectfully submit that neither Callicott nor Robsky, alone or in combination, teach or suggest a plurality of pressure activated sensors that are responsive to mechanical pressure as recited in Claims 1, 16, and 22 of the present invention. Accordingly, the Applicants respectfully submit that the embodiments of the present invention, as recited in Claims 1, 16, and 22, are not anticipated or rendered obvious by Callicott alone or in combination with Robsky and that the rejections under 35 U.S.C. § 103(a) are overcome.

Claims 5, 6, 8, 10, 11, and 14 depend from Claim 1. The Applicants respectfully submit that Callicott, alone or in combination with Robsky, does not anticipate the embodiments of the present invention recited in Claims 5, 6, 8, 10, 11, and 14 as these Claims are dependent on an allowable base Claim and recite

additional limitations. Accordingly, the Applicants respectfully assert that Claims 5, 6, 8, 10, 11, and 14 overcome the rejections under 35 U.S.C. § 103(a).

Claims 17-19, and 21 depend from Claim 16. The Applicants respectfully submit that Callicott, alone or in combination with Robsky, does not anticipate the embodiments of the present invention recited in Claims 17-19, and 21 as these Claims are dependent on an allowable base Claim and recite additional limitations. Accordingly, the Applicants respectfully assert that Claims 17-19, and 21 overcome the rejections under 35 U.S.C. § 103(a).

Claims 24 and 25 depend from Claim 22. The Applicants respectfully submit that Callicott, alone or in combination with Robsky, does not anticipate the embodiments of the present invention recited in Claims 24 and 25 as these Claims are dependent on an allowable base Claim and recite additional limitations. Accordingly, the Applicants respectfully assert that Claims 24 and 25 overcome the rejections under 35 U.S.C. § 103(a).

Claims 2-3, 7, 9, 12, 13, 20, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Callicott in view of Robsky and further in view of Kent et al (U.S. Patent No. 6,492,979), hereinafter referred to as "Kent." The Applicants respectfully submit that the claimed embodiments of the present invention are not rendered obvious by Callicott alone or in combination with Robsky and Kent.

Furthermore, the Applicants respectfully submit that the determination of obviousness cannot be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the present invention. There must be a teaching or suggestion within the prior art to select particular elements, and to combine them in the way claimed. The Applicants respectfully submit that neither Callicott, Robsky, nor Kent teach or suggest the combination of a single-piece bezel-less cover enclosing a handheld electronic device that allows mechanical transfer of pressure to pressure activated sensors as recited in Claims 1, 16, and 22 of the present invention. The Applicants further submit that there is no motivation for combining the apparatus' of Callicott, Robsky, and Kent in the manner recited in Claims 1, 16, and 22 of the present invention as each of the cited references teaches a complete and functioning input system.

Furthermore, a combination of Robsky and Kent would result in an apparatus in which the spacing means 20 of Robsky would interfere with the operation of the force sensors 300 of Kent. As a result, the spacing means 20 of Robsky can prevent sufficient deflection of the top cover (e.g., conductive membrane 24 of Robsky) to activate the force sensors 300 of Kent. Alternatively, the spacing means 20 of Robsky can prevent conveying sufficient mechanical pressure to the force sensors 300 of Kent to permit accurate measurement of the touch position.

Thus, the Applicants respectfully submit that the recited embodiments of the present invention are not anticipated by Callicott alone or in combination with

Robsky and Kent. Accordingly, the Applicants respectfully submit that the rejections of Claims 2-3, 7, 9, 12, 13, 20, and 23 U.S.C. § 103(a) are overcome.

Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Callicott in view of Robsky and further in view of McIntyre et al (U.S. Patent No. 6,360,928), hereinafter referred to as "McIntyre." The Applicants respectfully submit that the embodiment of the present invention recited in Claim 15 is not rendered obvious by Callicott alone or in combination with Robsky and McIntyre.

Claim 15 depends from Claim 1 of the present invention which recites (emphasis added):

a display mechanism;  
a plurality of pressure activated sensors; and  
a single-piece bezel-less top cover enclosing said handheld electronic device to allow mechanical transfer between said top cover and said plurality of pressure activated sensors, wherein said pressure activated sensors can be activated by mechanical pressure applied to the external surface of said single-piece cover enclosure.

As discussed above, neither Callicott nor Robsky teach or suggest a plurality of pressure activated sensors which are activated by mechanical pressure applied to a top cover. McIntyre fails to overcome the shortcomings of Callicott and Robsky. For example, McIntyre fails to teach or suggest the use of any pressure activated sensors to detect a touch event. Accordingly, the Applicants respectfully submit that the combination of Callicott, Robsky, and McIntyre do not teach or suggest the claim limitations recited in Claim 15 of the present invention and that the rejection of Claim 15 U.S.C. § 103(a) is overcome.

CONCLUSION

Based on the arguments presented above, the Applicants respectfully assert that Claims 1-25 overcome the rejections of record and, therefore, the Applicants respectfully solicit allowance of these Claims.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Date: 4/22/2004

Respectfully submitted,  
WAGNER, MURABITO & HAO LLP

  
Anthony C. Murabito  
Reg. No. 35,295

Two North Market Street  
Third Floor  
San Jose, California 95113  
(408) 938-9060